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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/489,514	01/21/2000	S. R. Narayanan	06618-406001	5937
20985	7590	05/25/2006	EXAMINER	
FISH & RICHARDSON, PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			MERCADO, JULIAN A	
		ART UNIT	PAPER NUMBER	
		1745		

DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/489,514	NARAYANAN ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Julian Mercado	1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 5-9-06.
- 2a) This action is **FINAL**.                                   2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 7-10 and 12-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 7-10 and 12-26 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Remarks***

This Office action is responsive to applicant's amendment filed May 9, 2006.

Claims 7-10 and 12-26 are pending. This Office action maintains the Final rejection of the claims in order to more properly set forth the statutory basis for rejection of claim 9 which was inadvertently omitted in the prior art rejection of the prior Office action. (examiner note: claim 9 was included in the 35 U.S.C. 112, first paragraph rejection of claims 7-10 and 12, rejection now withdrawn)

The period for reply has been restarted.

### ***Claim Objections***

The objection to claims 13, 20 and 23 has been obviated.

### ***Claim Rejections - 35 USC § 112***

The rejection of claims 7-10 and 12 are rejected under 35 U.S.C. 112, first paragraph has been obviated.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 18 has been amended to recite in the preamble “A process comprising:...” The body of the claim maintains the prior “providing...”, “applying...” and “bonding...” steps while also adding a step directed to “using said membrane...” As such, the claim is directed to a combination of a “process of making” and a “process of using.”, entities which exist in two different statutory classes of invention. The claim is rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a “process of making” nor a “process of using,” but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only.

Applicant’s arguments have been fully considered, however they are not found persuasive. Applicant is correct that the classes of claims include process, machine, manufacture or composition of matter. However, the examiner asserts that there are *two* statutory process classes of claims. The rejection of claim 18 under 35 U.S.C. 101 is maintained as the claim language encompasses both “process of making” and “process of using” transition phrases, and as such are entities which exist in *two* different statutory classes of invention.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For the reasons set forth above under 35 U.S.C. § 101 (discussion above), claim 18 is directed to a combination of a process of making and a process of using. Thus, the statutory type of invention (and hence the claimed scope) is indefinite; as a result of the combination of two separate statutory classes of invention a manufacturer or seller would not know the metes and bounds of the claim.

Applicant appears to refer to the claim in singular, as in “the process” (pg. 8). While the preamble indeed recites “A process”, that a single process is being claimed while two different process limitations are present in the body of the claim is the very basis for the ambiguity in the claim. Is “the process” a process of making, per the recited “providing...”, “applying...” and “bonding...”, or, is “the process” a process of using, per the recited “using said membrane...” ?

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-10, 13, 14, 18, 20 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico et al. in view of the Dupont Zonyl reference and Trainham III et al. (U.S. Pat. 5,411,641)

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico et al. in view of Dupont Zonyl reference and Trainham III et al., and further in view of Kindler.

Claims 15-17, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico et al. in view of the Dupont Zonyl reference and Trainham III et al., and further in view of Samuels et al.

The rejection(s) is maintained for the reasons of record.

In response to applicant's argument that Trainham teaches adding Nafion only as a binder, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Notwithstanding the purpose for which Trainham arguably employs Nafion, which is the same material claimed by applicant, the Nafion is nonetheless added as part of the catalyst ink mixture. As to the Nafion only being added for the purpose of improving binding, not for improving ion conduction, this is not persuasive as the "improving ion conduction" is recited as being an inherent property of the Nafion material itself and not as a resultant step from the claimed process of making.

With respect to claims 13, 18 and 19 and regarding a substrate of carbon fiber paper having a fluorocarbon polymer added thereto, please refer to page 5 of the prior Office action,

"the fluoroionomer, i.e. fluorcarbon polymer is specifically disclosed as being supported on fluorocarbon fabric."

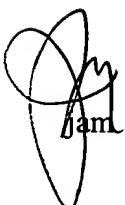
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



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